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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/029,194	12/28/2001	Shahram Shah-Heydari	91436-347	5400

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EXAMINER
EL CHANTI, HUSSEIN A

ART UNIT	PAPER NUMBER
2157	

DATE MAILED: 01/26/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 November 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-4,7-11,16-24 and 28* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4,7-11,16-24 and 28* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

1.   This action is responsive to RCE received on Nov. 11, 2005. Claims 5, 6, 12-15

and 25-27 were canceled. Claim 28 was newly added. Claims 1-3, 7-10, 16-19, 21-24

were amended. Claims 1-4, 7-11, 16-24 and 28 are pending examination.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2.   Claims 1-4, 7-11, 16-24 and 28 are rejected under 35 U.S.C. 102(e) as being

anticipated by Kelly et al., U.S. Patent No. 6,804,199 (referred to hereafter as Kelly).

As to claim 1, Kelly teaches a method of extending a spanning hierarchical

protection tree in a mesh network comprising:

at a current node, receiving an invitation to become a child of a first adjacent

node (col. 4 lines 45-col. 5 lines 20);

if a minimum link bandwidth along a protection path from said current node to a

root node of the spanning hierarchical protection tree which visits the first adjacent node

is greater than a minimum link bandwidth of any existing protection path from said

current node to said root node: designating said first adjacent node as a primary parent

of said current node in said tree; and from said current node, sending an invitation to

become a child of said current node in said tree to each adjacent node of said current

node that is not said first adjacent node (col. 6 lines 50-col. 7 lines 65, the best link is

determined according to the bandwidth capability).

As to claim 2, Kelly teaches the method of claim 1, Kelly further teaches. if said

minimum link bandwidth along said protection path from said current node to said root

node which visits the first adjacent node is not greater than said minimum link

bandwidth of any existing protection path from said current node to said root node:

designating said first adjacent node as a backup parent of said current node in said tree

(col. 6 lines 50-col. 7 lines 65).

As to claim 3, Kelly teaches the method of claim 1, wherein said backup parents

is one of a number of backup parents of said current node, each one of said number of

backup parents having a priority based on a minimum link bandwidth of a protection

path from said current node to said root node which visits said one of said number of

backup parents, with a higher minimum link bandwidth being associated with a higher

priority (col11 lines 11-col. 12 lines 65).

As to claim 4, Kelly teaches the method of claim 3, Kelly further teaches ensuring

that said designating of said first adjacent node as a primary parent of said current node

does not introduce a loop into said spanning hierarchical protection tree (col. 6 lines 50-

col. 7 lines 65).

As to claim 7, Kelly teaches a computing device comprising: a processor;

memory in communication with said processor, storing processor readable instructions

adapting said device to extend a spanning hierarchical protection tree in a mesh

network (col. 4 lines 45-col. 5 lines 65) by:

at a current node, receiving an invitation to become a child of a first adjacent

node; and if a minimum link bandwidth along a protection path from said current node to

a root node of the spanning hierarchical protection tree which visits the first adjacent

node is greater than a minimum link bandwidth of any existing protection path from said

current node to said root node, designating said first adjacent node as a primary parent

of said current node in said tree-(col. 11 lines 11-col. 12 lines 65).

As to claim 8, Kelly teaches the computing device of claim 7, wherein said

instructions further adapt said device to: if said minimum link bandwidth along raid

protection path from said current node to said root node which visits the first adjacent

node is greater than said minimum link bandwidth of any existing protection path from

said current node to said root node, send from said current node an invitation to

become a child of said current node in said tree to each adjacent node of said current

node that is not said first adjacent node (col. 11 lines 11-col. 12 lines 65).

As to claim 9, Kelly teaches tie computer device of claim 7 and claim 8, wherein

said memory further comprises; instructions adapting said device to:

If said minimum link bandwidth along said protection path from said current node to said

root node which visits the first adjacent node is not greater than said minimum link

bandwidth of any existing protection path from said current node to said root node,

designate said first adjacent node as a backup parent of said current node in said tree

(col. 12 lines 9-col. 13 lines 64).

As to claim 10, Kelly teaches the computing device of claim 7, claim 8 and claim 9, wherein said backup parent is one of a number of backup parents of said current node, each one of said number of backup parents having a priority based on a minimum link bandwidth of a protection path from said current node to said root node which visits said one of said number of backup parents, with a higher minimum link bandwidth being associated with a higher priority (col. 11 lines 11-col. 12 lines 65).

As to claim 11, Kelly teaches the computing device of claim 7, claim 8, claim 9 and claim 10, wherein said instruction further adapt said device to insure that said designating of said first adjacent node as a primary parent of said current node does not introduce a loop into said spanning hierarchical protection tree (col. 11 lines 11-col. 12 lines 65).

As to claims 16 and 28, Kelly teaches computer readable medium storing computer software that, when loaded into a computing device, adapts said device to extend a spanning hierarchical protection tree it a mesh network by: at a current node, receiving an invitation to become a child of a first adjacent node (column 4 lines 45-col. 5 lines 65); and

if a minimum link bandwidth along a protection path from said current node to a root node of the spanning hierarchical protection tree which visits the first adjacent node is greater than a minimum link bandwidth of any existing. protection path from said current node to said root node, designating said first adjacent node as a primary parent of said current node in said tree (col. 11 lines 11-col. 12 lines 65).

As to claim 17, Kelly teaches the computer readable medium of claim 16, wherein said software is further capable of adapting said device by: if said minimum link bandwidth along said protection path from said current node to said root node which visits the first adjacent node is greater than said minimum link bandwidth of any existing protection path from said current node to said root node, sending from said current node an invitation to become a child of said current node in said tree to each adjacent node of said current node that is not said first adjacent node (col. 11 lines 11-col. 12 lines 65).

As to claim 18, Kelly teaches the computer readable medium of claim 16 and claim 17, wherein said software is further capable of adapting said device by:

if said minimum link bandwidth along said protection path from said current node to said root node which visits the first adjacent node is not greater than said minimum link bandwidth of any exiting protection path from said current node to said root node, designating said first adjacent node as a backup parent of said current node in said tree (col. 11 lines 11-col. 12 lines 65).

As to claim 19, Kelly teaches the computer readable of claim 16, claim 17 and claim 18, wherein said backup parent is one of a number of backup parents of said current node, each one of said number of backup parents having a priority based on a minimum link bandwidth of a protection path from said current node to said root node which visits said one of said number of backup parents, with a higher minimum link bandwidth being associated with a higher priority (col. 11 lines 11-col. 12 lines 65).

As to claim 20, Kelly teaches the computer readable of claim 16, claim 17, claim 18 and claim 19, wherein software is further capable of adapting said device to extend a

spanning hierarchical protection tree in a mesh network by ensuring that said

designating of said first adjacent node as a primary parent of said current node does not

introduce a loop into said spanning hierarchical protection tree (col12 lines 15-col. 13

lines 65).

As to claim 21, Kelly teaches a computer readable medium storing computer

software that, when loaded into a computing device, adapts said device to reconnect a

node disconnected from a spanning hierarchical protection tree in a mesh network to

the spanning hierarchical protection tree by: designating a backup parent of said

disconnected node in said .tree to be a _ primary parent of said disconnected node in

said tree; and from said disconnected node, sending an invitation to become a child of

said disconnected node in said tree to each adjacent node of said disconnected node

that is not said primary parent (col. 11 lines 11-col. 12 lines 65).

As to claim 22, Kelly teaches, the computer readable medium of claim 21,

wherein said software is further capable of adapting said device by: for each said

adjacent node, if said minimum link bandwidth along a protection path from said

auxiliary node to said root node of the spanning hierarchical protection tree which visits

said adjacent node is not greater than said minimum link bandwidth of any existing

protection path from said auxiliary node to said root node, designating said adjacent

node as a backup parent of said auxiliary node in said tree (col. 11 lines 11-col. 12 lines

65).

As to claim 23, Kelly teaches computer readable medium storing computer

software that; when loaded into a computing device, adapts said-device to connect an _

auxiliary node to a spanning hierarchical protection tree in a mesh network (fig 17) by:

receiving an invitation from each adjacent node of said auxiliary node for said auxiliary

node to become a child of said adjacent node (col. 12 lines 10-col. 13 lines 45); and

designating as a primary parent of said auxiliary node the one adjacent node that is

visited by a protection path from said auxiliary node to a root node of said spanning

hierarchical protection tree whose minimum link bandwidth is at least as large as the

largest minimum link bandwidth of all existing protection paths from said auxiliary node

to said root node (col. 11 lines 11-col. 12 lines 65).

As to claim 24, Kelly teaches computer readable medium storing computer

software that, when loaded into a computing device, adapts said device to connect an

auxiliary node to a spanning hierarchical protection tree in a mesh network by:

requesting an invitation from each adjacent node of said auxiliary node for said auxiliary

node to become a child of said adjacent node; from each said adjacent node, receiving

an invitation to become a child of said adjacent node (col. 11 lines 11-col. 12 lines 65)

each said adjacent node: if a minimum link bandwidth along a protection path from said

auxiliary node to a root node of the spanning hierarchical protection tree which visits

said adjacent node is greater than a minimum link bandwidth of any existing protection

path from said auxiliary node to said root node: designating said adjacent node as a

primary parent of said auxiliary node in said tree (col. 11 lines 11-col. 12 lines 65); and

from said auxiliary node, sending an invitation to become a child of said auxiliary node

in said tree to each further adjacent node of said auxiliary node that is not said primary

parent adjacent node (col. 11 lines 11-col. 12 lines 65).

Response to Arguments

3.   Applicant's arguments have been fully considered but are moot in view of the new grounds of rejection.

4.   The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

5.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hussein A. El-chanti whose telephone number is (571)272-3999. The examiner can normally be reached on Mon-Fri 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ario Etienne can be reached on (571)272-4001. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Hussein El-chanti

Jan. 11, 2006

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